



COUNTY OF SAN LUIS OBISPO HEALTH AGENCY

Public Health Department

Jeff Hamm
Health Agency Director

Penny Borenstein, M.D., M.P.H.
Health Officer



Public Health
Prevent. Promote. Protect.

August 31, 2015

Chevron Environmental Management Company
Attn: Rik Williams
276 Tank Farm Road
San Luis Obispo, CA 93406

REVIEW OF HUMAN HEALTH RISK ASSESSMENT FOR THE INTERTIDAL ZONE IN A REMOTE CLIFF AREA LOCATED BELOW FORMER UNOCAL AVILA TANK FARM, AVILA BEACH, CA.

Dear Mr. Williams:

San Luis Obispo County Environmental Health Services (EHS) has reviewed the Human Health Risk Assessment for the intertidal area (IZHHRA) and the Response To Comments for the intertidal zone below the southern cliff face of the former Avila Terminal. EHS has reviewed this case with the County Health Officer for concurrence. Our Agency along with San Luis Obispo County Air Pollution Control District (APCD), the Regional Water Quality Control Board (RWQCB) and the California Department of Fish and Wildlife (DFW) have participated in the monitoring team for this project.

Background:

- On May 8, 2012, during a routine monitoring event the monitoring team discovered sheen in a remote tide pool at the south end of the beach, only accessible during very low tide. Dan Niles of the RWQCB and Melissa Boggs of DFW were the agency representatives on the monitoring team that day; EHS was not in attendance.
- Chevron obtained a sample and received results on May 10, 2012.
- Chevron provided a spill report to California Office of Emergency Services (Cal-OES) on May 9, 2012 at approximately 6 PM based on observations of the sheen. The material in the sheen was unconfirmed at the time of the report.
- The lab report produced on May 10, 2012, indicated very dilute concentrations gasoline constituents including benzene.

- EHS staff discussed the results with Chevron, RWQCB, DFW and APCD on May 10, 2012.
- The subject tide pools were covered by sand on May 10, 2012 to approximately October 2012.
- The subject tide pools are present at low tides and accessible about 30 times a year. Accessibility is also limited due to rocky terrain and surf.
- On May 10, 2012, the agencies referenced above discussed providing a media release. An exposure point was not presented since the tide pools were covered with sand. Based on this and the contaminate concentration a media release was not required at the time.
- The agencies discussed providing a media release before the tide pools would be exposed again, if needed. EHS discussed the situation with the County Health Officer (CHO). The CHO stated a media release would be provided by the Health Agency, if a threat to public health was presented. If presented, a notice would be completed to safeguard public health and safety pursuant to California Water Code, Section 13271. This code is applicable to this situation in that the sheen was and is not a hazardous waste. Discharges or threatened discharges of hazardous waste that are likely to cause substantial injury to public health require our Agency to notify the Board of Supervisors and the local news media pursuant to California Health and Safety Code 25180.7. Concentrations of contaminants (particularly benzene) within the sheen did not and do not exceed thresholds defined pursuant to California Code of Regulations Title 22, Section 66261.24 Characteristic of Toxicity for Hazardous Waste to be classified as a hazardous waste.
- On May 10, 2012, EHS required Chevron to perform a preliminary HHRA based on the initial sample results received. The HHRA would be used to determine the level of risk to human health in advance of the next event when tide pools would be present.
- EHS reviewed the preliminary HHRA the week following May 10, 2012 and found the potential cancer risk was estimated between 1.2 and 3 in ten million. EHS and its consultants found the HHRA to be performed properly and in accordance with EPA guidance.
- EHS performed independent calculations pursuant to guidance to determine potential cancer risk on approximately 13 sample events during 2012 and 2013 when tide pools were present. EHS found the range of potential calculated risk to be 2 in ten million to 6 in one hundred million.
- Based on the preliminary HHRA and continued monitoring, EHS determined in consultation with the CHO, that safeguards were not warranted and a media release was not required, since a threat to public health was insignificant.

- EHS performed a few site visits with the monitoring team and reviewed each report of monitoring events provided by Chevron and their consultants.
- EHS required Chevron to prepare another HHRA utilizing data collected over a one to two year period.
- RWQCB required Chevron to provide an assessment and cleanup plan for the contamination believed to originate from a former tank and or piping at the tank farm.
- RWQCB approved a plan and Chevron has been implementing it. Chevron's remediation of the contamination includes vapor extraction and groundwater removal. According to the latest data, approximately 25,150 pounds of volatile organic compounds (VOC) have been removed and approximately 304,600 gallons of groundwater have been removed and treated.
- Tide pools were present during approximately 26% of 53 monitoring events in 2012 and 2013. Tide pools are covered by sand for the majority events when the subject area is accessible. Tide pool surface area and depth have varied. Sheen was difficult to identify during some monitoring events.
- EHS has never received a complaint or observation from the public regarding this situation.
- EHS received a final IZHHRA for the Intertidal Zone from Chevron in 2014 utilizing data collected during 2012 and 2013.

Determination:

- The IZHHRA is determined to be complete and consistent with EPA Guidance.
- Potential risk to human health would be considered very minimal with a range between 4.13 in ten million to 1.29 in a million cancer risk providing all exposure parameters are met for dermal exposure and seawater ingestion from tide pools of approximately 30 days a year for 30 years. EPA guidance suggests action should be considered to protect human health if cumulative potential cancer risk to human health is between 1 in a million to 1 in ten thousand. This guidance is separate from resource protection standards overseen by the RWQCB and DFW. Chevron is currently completing remediation of the contamination source in cooperation with the RWQCB.
- Potential risk to human health is considered insignificant since ingestion of sea water from tide pools (.3 liters approximately 30 times a year for 30 years) is unlikely, especially due to typical depth and inaccessibility. If this point is

considered, the potential risk range is 2.16 to 7.18 in ten million with dermal exposure, without ingestion of seawater from tide pools containing sheen.

- Based on this evaluation, EHS and the County Health Officer, Penny Borenstein conclude our monitoring of this situation and confirm the initial determination. Potential risk to public health is insignificant, safeguards are not warranted, a public notice is and was not required by the Health Agency, since the release does not pose an imminent threat to Public Health.
- Chevron may want to re-examine (as performed in 2012) if any obligations exist for public notifications.

If you have questions concerning this letter, please call Aaron LaBarre at 805-781-5595.

Sincerely,



Aaron LaBarre, REHS
Supervising Environmental Health Specialist
Hazardous Materials Section
Environmental Health Services

C:

- Thea Tryon Regional Water Quality Control Board
- Melissa Boggs, Department of Fish and Wildlife
- Aeron Arlin-Genet, County APCD
- Steve McMasters, Ryan Hostetter, County Planning & Building
- Charles Anders, Strategic Initiatives